



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,234	03/07/2001	Kathleen B. Gross	56290USA5A.002	5421

7590 10/23/2002

Attention: Scott A. Bardell
Office of Intellectual Property Counsel
3M Innovative Properties Company
P.O. Box 33427
St. Paul, MN 55133-3427

EXAMINER

KEEHAN, CHRISTOPHER M

ART UNIT	PAPER NUMBER
----------	--------------

1712

7

DATE MAILED: 10/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/801,234

Applicant(s)

GROSS ET AL.

Examiner

Christopher M. Keehan

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-14, 16-22, 24-29, and 31-35 is/are rejected.
- 7) ☒ Claim(s) 7, 15, 23 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Allowable Subject Matter

In the previous office action, Claims 7, 15, 23, and 30 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

The rejection of Claims 1-6, 8-14, 16-22, 24-29, and 31-35 under 35 U.S.C. 103(a) as being unpatentable over Pocius et al. (4,521,490) in view of the Handbook of Epoxy Resins has been withdrawn in light of a new rejection; therefore, Applicant's arguments in regards thereto are moot.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

Art Unit: 1712

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1, 2, 4-6, 8-14, 16, 17, 19-22, 24-29, and 31-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Doba (WO 00/79582 A1). Regarding claims 1, 3, and 34, Doba discloses an article of manufacture comprising a substrate comprising silicon, plastics, and polyimides (page 26, lines 1-6), and an adhesive comprising the reaction product of epoxy resin (page 10, lines 2-3), a curative (page 17, lines 25-29), and an epoxy reactive thioether-containing compound (page 9, lines 21-27), adhesively bonded to the substrate (Figure 1).

Regarding claim 2, Doba discloses a plastic of acrylonitrile-butadiene-styrene (page 26, lines 1-6) and an thioether-containing compound with a molecular weight of from about 320 to about 650 (page 11, lines 12-17).

Regarding claims 5 and 6, Doba discloses wherein the epoxy reactive thioether-containing compound comprises a thioether di-epoxide, and a polyfunctional phenolic glycidyl ether epoxy resin (page 10, lines 4-page 11, line 22).

Regarding Claim 8, the same reasoning as set forth above for Claim 1 also applies to Claim 8, as the claimed subject matter is essentially the same.

Regarding Claim 9, the same reasoning as set forth above for Claim 2 also applies to Claim 9, as the claimed subject matter is essentially the same.

Regarding Claim 10, Doba does not specifically disclose wherein the substrate is a print head or inkjet. Doba does disclose applying the adhesive composition to silicon, polyimides, and plastics, which could be used for the instantly claimed intended use.

Art Unit: 1712

This appears to be an obvious choice for one skilled in the art to apply the coating to a substrate that suits a particular need, based on one's intended use.

Regarding Claim 11, the same reasoning as set forth above for Claim 1 also applies to Claim 11, as the claimed subject matter is essentially the same.

Regarding Claim 12, the same reasoning as set forth above for Claim 2 also applies to Claim 12, as the claimed subject matter is essentially the same.

Regarding Claims 13 and 14, the same reasoning as set forth above for Claims 5 and 6 also applies to Claims 13 and 14, as the claimed subject matter is essentially the same.

Regarding Claim 16 and 17, Doba discloses wherein the epoxy reactive thioether-containing compound is present in from about 5 to about 15 percent by weight (page 17, lines 20-24), which is included in the instantly claimed ranges.

Regarding Claim 19, Doba discloses fillers (page 21, lines 3-8).

Regarding Claim 20, Doba discloses a catalyst of an imidazole (page 18, line 8- page 19, line 11).

Regarding Claim 21, the same reasoning as set forth above for Claim 1 also applies to Claim 21, as the claimed subject matter is essentially the same.

Regarding Claim 22, the same reasoning as set forth above for Claim 2 also applies to Claim 22, as the claimed subject matter is essentially the same.

Regarding Claim 24, the same reasoning as set forth above for Claim 20 also applies to Claim 24, as the claimed subject matter is essentially the same.

Regarding Claim 25, Doba discloses a polyamine curative (page 17, lines 30-32).

Art Unit: 1712

Regarding Claim 26, Doba discloses an additive comprising silicon atoms (page 21, lines 23-29).

Regarding Claim 27, although it appears that Doba does not specifically disclose an adhesive with low-stress and water and solvent resistance, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have achieved at least similar properties in Doba as instantly claimed, because the materials of Doba are at least similar to those as instantly claimed, and at least similar materials would have been expected to yield at least similar results. Similar processes can reasonably be expected to yield products which inherently have the same properties. *In re Spada* 15 USPQ 2d 1655 (CAFC 1990); *In re DeBlauwe* 222 USPQ 191; *In re Wiegand* 86 USPQ 155 (CCPA 195).

Regarding Claim 28, the same reasoning as set forth above for Claims 11 and 14 also applies to Claim 28, as the claimed subject matter is essentially the same.

Regarding Claim 29, the same reasoning as set forth above for Claim 5 also applies to Claim 29, as the claimed subject matter is essentially the same.

Regarding Claim 31, the same reasoning as set forth above for Claim 6 also applies to Claim 31, as the claimed subject matter is essentially the same.

Regarding Claim 32, the same reasoning as set forth above for Claim 25 also applies to Claim 32, as the claimed subject matter is essentially the same.

Regarding Claim 33, the same reasoning as set forth above for Claim 20 also applies to Claim 33, as the claimed subject matter is essentially the same.

Regarding Claim 35, the same reasoning as set forth above for Claim 2 also applies to Claim 35, as the claimed subject matter is essentially the same.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doba (WO 00/79582 A1). Doba, as applied to claim 1 above, are as set forth and incorporated herein. Doba does not appear to specifically disclose a substrate of noble metal as instantly claimed. However, Doba does disclose electrodes that can be substrates for the adhesive to be bonded (Figure 1 and page 26, lines 12-18). It is the Examiner's position that it is known in the art to use at least gold, platinum, palladium, and silver as electrodes in semiconductor manufacturing because these elements are extremely conductive and resistant to oxidation.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doba ((WO 00/79582 A1) in view of Pocius et al. (4,521,490). Doba, as applied above, are as set forth and incorporated herein. Doba does not appear to specifically disclose a poly(oxyhydrocarbolene) diamine curative. Pocius et al. disclose an article comprising a substrate, and an adhesive comprising the reaction product of epoxy resin, a curative,

Art Unit: 1712

and an epoxy reactive thioether-containing compound, adhesively bonded to a substrate (col.5, line 25-col.6, line 66), and a poly(oxyhydrocarbolene) diamine curative (col.6, lines 38-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted the poly(oxyhydrocarbolene) diamine curative as taught by Pocius et al. in the composition of Doba because Pocius et al. teach that using a poly(oxyhydrocarbolene) diamine curative in an epoxy and epoxy reactive thioether-containing compound mixture produces an adhesive bond of improved peel strength at room temperature without loss of lap shear strength at room and elevated temperatures, resulting in a higher quality product.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Keehan whose telephone number is (703) 305-2778. The examiner can normally be reached on Monday-Friday, from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Dawson can be reached on 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Art Unit: 1712

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Christopher Keehan



October 16, 2002



Robert Dawson
Supervisory Patent Examiner
Technology Center 1700